



IMVP's Globalization Research Program

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International Motor Vehicle Program

Global-scale Research Projects

- The Internationalization of the Italian Auto Industry.
Camuffo/Volpato
- Globalization and Automobile Design.
Fujimoto/Sugiyama/Muffatto
- Globalization and Jobs in the Automotive Industry.
Sturgeon/Florida



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Regional-scale Research Projects

- Improving Competitiveness in Manufacturing: Value Chain Issues Dealing with the Automobile Sector in Argentina and MERCOSUR. Luchi, Roberto.
- Lean Production and NAFTA: A Survey of Canadian and Mexican Automotive Parts Suppliers. Molot/Eden/Husbands.
- The Japanese Automotive Industry in ASEAN. Shimokawa, Koichi.



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National-scale Research Projects

- **The Changing Faces of Globalization in a Big Emerging Market: Brazil and the Motor Vehicle Industry.** Addis-Botelho, Caren.
- **The South African Automotive Industry in a Globalizing World.** Black, Anthony.
- **Globalization's Impact on the Chinese Automobile Industry: Policy Assessments, Typology of Strategies, and Management Influences of Foreign Companies.** Fujimoto/Lee/Chen.
- **The Links Between Lean Production, Industrial Competitiveness, and Infrastructure in Emerging Economies: Evidence from the Indian Auto Industry.** Gulyani, Sumila.
- **Changing Lanes in China: Developing the Auto Industry in an Era of Reform.** Thun, Eric.



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GLOBALIZATION AND JOBS IN THE AUTOMOTIVE INDUSTRY



A STUDY FUNDED BY
THE ALFRED P. SLOAN FOUNDATION AND
MIT'S INTERNATIONAL MOTOR VEHICLE PROGRAM

Richard Florida, Principal Investigator
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Locational Typology

- Home, or “**TYPE 1**” (e.g. GM in the USA).
- Large existing market area or “**TYPE 2**” (e.g. USA, Japan, Germany)
- Periphery of large existing market area, or “**TYPE 3**” (e.g. Mexico, Canada, Spain, East Europe)
- Big emerging market, or “**TYPE 4**” (e.g. China, India, Brazil, Vietnam)

	TYPE 1	TYPE 2	TYPE 3	TYPE 4
Strategic intent	Market seeking	Market seeking	Cost cutting	Market seeking
Capacity	High	High	High	Low
Wages	High	High	Low	Low
App of lean principles	Low (except Japan)	Low (except Japan)	High	High
Vehicle design?	Yes	Partial	No	No
Level of integration	High	High	Medium	Low
Level of local supply	High	Medium-to-high	Medium	Low
Level of exports	Low (except Japan)	Low	High	Low



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Assembly Plant Characteristics by Locational Type

	TYPE 1	TYPE 2	TYPE 3	TYPE 4	World
# of Plants (n=521)	199	58	60	212	529
% of Plants	38%	11%	11%	40%	100%
Average Unit Output 1995 (n=479)	149,943	126,635	101,599	31,102	99,236
Average Unit Capacity 1996 (n=419)	229,835	188,378	155,810	44,195	157,109
Total Unit Output 1995 (n=479)	29,388,903	6,964,901	5,892,756	5,287,328	47,533,888
% of World Production	62%	15%	12%	11%	100%
Total Unit Capacity 1996 (n=419)	41,829,942	9,795,635	8,413,747	5,789,497	65,828,821
% of World Capacity	64%	15%	13%	9%	100%
Capacity Utilization 1995	70%	71%	70%	91%	72%
Average Employment (n=149)	5,873	5,329	3,957	2,700	4,466
Average Unit Output/Worker/Year	26	24	26	12	22
Average Inception Date (n=201)	1958	1969	1979	1986	1977

Source: Globalization and Jobs Assembly Plant Database, October, 1988



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Supplier Plant Characteristics by Locational Type

	TYPE 1	TYPE 2	TYPE 3	TYPE 4	World
# of Plants (n=2,211)	674	652	385	470	2,211
% of Plants	30%	29%	17%	21%	100%
Average Employment (n=377)	1,102	577	468	785	790
Average Inception Date (n=269)	1969	1980	1981	1988	1978

Source: Globalization and Jobs Supplier Plant Database, October, 1998.



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Number and Share of Automotive Plants by Locational Type, Selected Products

	Wiring Harnesses	Coatings	Electronics	Chassis	Stampings	Final assembly
TYPE 1	4	18	56	31	25	199
TYPE 2	20	12	58	27	12	58
TYPE 3	27	11	48	29	13	60
TYPE 4	26	3	64	41	8	212
Total	77	44	226	128	58	529
TYPE 1	5%	41%	25%	24%	43%	38%
TYPE 2	26%	27%	26%	21%	21%	11%
TYPE 3	35%	25%	21%	23%	22%	11%
TYPE 4	34%	7%	28%	32%	14%	40%
Total	100%	100%	100%	100%	100%	100%

Source: Globalization and Jobs Supplier and Assembly Plant Databases, October, 1998.



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The Rise of Local Sourcing



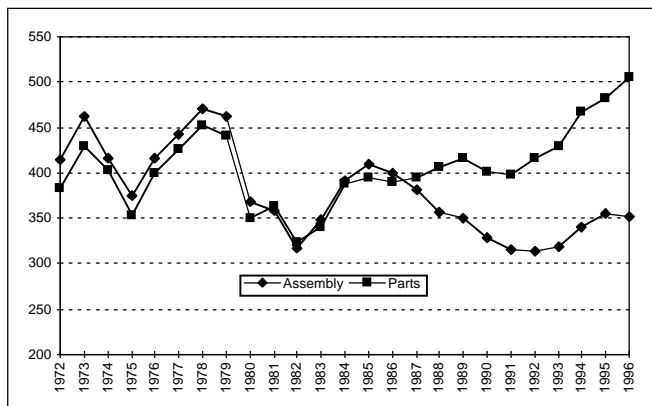
Source: Dassbach, 1989



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U.S. Motor Vehicle Assembly and Parts Manufacturing Employment, 1972-1996 ('000 jobs)



Note: Includes SIC 3711 (Motor Vehicles and Car Bodies and SIC 3714 (Motor Vehicle Parts and Accessories)
Source: American Automobile Manufacturers Association

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